

Transit Cooperative Research Program (TCRP) Update

(1) Available TCRP publications; (2) new FY 2023 projects—panel nominations due Friday, February 3, 2023; (3) RFPs for proposals due Tuesday, January 31, 2023; (4) upcoming and recent webinars; and (5) request for submission of new problem statements due June 16, 2023

January 2023 TRB Annual Meeting



TRANSPORTATION RESEARCH BOARD

Available Transit Cooperative Research Program (TCRP) Publications (listed by most recent release)

- [On-Street Bus Operations Management](#) (2022) – Synthesis 166
- [Measuring and Managing Fare Evasion](#) (2022)
- [Legal Issues and Emerging Technologies](#) (2022)
- [Improving Access and Management of Public Transit ITS Data](#) (2022)
- [Racial Equity, Black America, and Public Transportation, Volume 1: A Review of Economic, Health, and Social Impacts](#) (2022)
- [Quantitative Procedures for Designing and Operating Ferry Services](#) (2022)
- [Fare-Free Transit Evaluation Framework](#) (2022)
- [Policing and Public Transportation](#) (2022)
- [The Impacts of Vehicle Automation on the Public Transportation Workforce](#) (2022)
- [Bus Rapid Transit: Current State of Practice](#) (2022)

Available TCRP Publications listed by most recent release (2 of 3))

- [Strategies for Deterring Trespassing on Rail Transit and Commuter Rail Rights-of-Way, Volume 2: Research Overview](#) (2022)
- [Strategies for Deterring Trespassing on Rail Transit and Commuter Rail Rights-of-Way, Volume 1: Guidebook](#) (2022)
- [Considering the Unbanked in Cashless Fare Payment at Point of Service for Bus/Demand-Response Services](#) (2022)
- [Command-Level Decision Making for Transportation Emergency Managers](#) (2022)
- [Coordination of Public Transit Services and Investments with Affordable Housing Policies](#) (2022)
- [Fare Capping: Balancing Revenue and Equity Impacts](#) (2022)
- [ADA Paratransit and Other Demand-Responsive Transportation Services in Small to Midsized Transit Agencies](#) (2022)
- [Recent Decline in Public Transportation Ridership: Hypotheses, Methodologies, and Detailed City-by-City Results](#) (2022)
- [Recent Decline in Public Transportation Ridership: Analysis, Causes, and Responses](#) (2022)
- [Assessing Equity and Identifying Impacts Associated with Bus Network Redesigns](#) (2022)

Available TCRP Publications listed by most recent release (3 of 3)

- [Cybersecurity in Transit Systems](#) (2022)
- [Uses of Social Media in Public Transportation](#) (2022)
- [Transit Safety Risk Assessment Methodologies](#) (2021)
- [Resource Guide for Improving Diversity and Inclusion Programs for the Public Transportation Industry](#) (2021)
- [Assessing and Mitigating Electrical Fires on Transit Vehicles](#) (2021)
- [Transit and Micromobility](#) (2021)
- [Prioritization of Public Transportation Investments: A Guide for Decision-Makers](#) (2021)
- [Joint Development Agreements Using FTA Funds or FTA-Funded Assets](#) (2021)
- [Use of Agency Service Agreements in ADA Paratransit Delivery](#) (2021)
- [Innovative Practices for Transit Planning at Small to Mid-Sized Agencies](#) (2021)

TCRP Oversight and Project Selection (TOPS) Commission funded for FY 2023: Annual Projects

- J-01 Dissemination and Implementation of TCRP Research Findings
- J-04 Innovations Deserving Exploratory Analysis - The Transit IDEA Program
- J-05 Legal Aspects of Transit and Intermodal Transportation Programs
- J-07 Synthesis of Information Related to Transit Problems
- J-11 Quick-Response Research on Long-Term Strategic Issues

Panel information is available online

at <https://www.mytrb.org/OnlineDirectory/Committee/SubmitSearch>

Program announcement with project descriptions is

at https://onlinepubs.trb.org/onlinepubs/tcrp/docs/TCRP_FY2023_Project_Announcement.pdf

TCRP Oversight and Project Selection (TOPS) Commission funded for FY 2023: Panel nominations for new projects due no later than 3 February 2023

- B-53 Planning for the Travel Needs of Women
- J-11/Task 45 Future of Commuter Rail
- J-11/Task 46 New Tech, New Skills, New Jobs

Contact Dianne Schwager dschwager@nas.edu

- D-24 Determination of Actual Derailment Loads on Transit Bridges
- E-15 COVID-19 and Transit Air Quality Protections
- J-11/Task 47 Affordable Housing and Transit

Contact Mariela Garcia-Colberg mgarciacolberg@nas.edu

Please complete a nomination form by going to <https://volunteer.mytrb.org/Panel/AvailableProjects>

Program announcement with project descriptions is at

https://onlinepubs.trb.org/onlinepubs/tcrp/docs/TCRP_FY2023_Project_Announcement.pdf

TCRP Oversight and Project Selection (TOPS) Commission funded for FY 2023: Panel nominations for new projects due no later than 3 February 2023

- A-49 Fare Policies, Structures, and Technologies -- 2022 Updates
- A-50 Practical Considerations for Developing Transition Plans to Zero-Emission Fleets
- A-51 Innovative Practices for Technology Implementation at Rural, Small, and Mid-Sized Transit Agencies
- B-51 Floating Transit Stops and Passengers with Vision Disabilities
- B-52 Intercity Bus: The State Role Update
- D-23 Guidebook for Planning and Constructing a Small and Rural Tribal Transit Facility
- F-31 Modernizing Transit Station Staffing Management

Contact Stephan A. Parker saparker@nas.edu

Please complete a nomination form by going to <https://volunteer.mytrb.org/Panel/AvailableProjects>

Program announcement with project descriptions

is at https://onlinepubs.trb.org/onlinepubs/tcrp/docs/TCRP_FY2023_Project_Announcement.pdf

TCRP New Synthesis Topics funded for FY 2022

- SA-56 Use of Automatic Vehicle Monitoring (AVM) and Vehicle Health Monitoring/Diagnostic Systems by Transit Agencies
- SA-57 Statewide and Regional Approaches to the Development of Comprehensive Transit Information Systems
- SA-58 Analysis of Transit Exclusion Policies in Passenger Transportation Systems
- SA-59 Electronic Surveillance of Railroad-Highway Crossings for Collision Avoidance, State of the Practice
- SA-60 Examination of Transit Agency Coordination with Electric Utilities
- SB-37 Emerging, Non-traditional Performance Indicators Focused on Mobility, Access, and Equity in Transit / Equitable Transit Service: Agency Goals and Actions
- SB-38 Accessible Vehicles Fleet Configuration

Propose New Topics for the 2023 TCRP Synthesis Program

The deadline for the upcoming submission cycle is March 24, 2023.

In the coming year, TCRP will fund seven (7) new synthesis topics. Anyone may propose topics.

All proposals for topics must be submitted through the TCRP Synthesis Topic Submission Portal: [TCRP Synthesis Topic Submission Portal](#)

For questions, please contact Mariela Garcia-Colberg at mgarciacolberg@nas.edu

Transit Innovations Deserving Exploratory Analysis (IDEA) Program

Transit IDEA program funds early-stage development of high risk, high payoff innovations to advance transit systems, particularly **Efficiency, Safety, Security, Maintenance, and Ridership**.

Project Completed in 2022

T-94: Evaluation of Transit Vehicle Brake Inspection through Ultrasonic Emission Analysis

T-95: Connected and Automated Parking Feasibility -- A Pilot Study

T-96: Multi-stage Planning for Electrifying Transit Bus Systems with Multifunction Charging Facilities

T-98: Safety Assessment of Interaction between Autonomous Shuttle Bus and Vulnerable Road Users

Projects Currently Active

T-97: Open Platform to Attract, Organize, and Coordinate Volunteers for Rural and Small Urban

T-99: Bike Love

T-100: TrainMate Robotic System; Making Public Transportation, Public

T-101: Multimodal Transit with Citopia

T-102: Real-Time Trip Support for Multimodal Traveler

Summaries of all Transit IDEA projects are provided in the Transit IDEA Annual Progress Report accessible via the link:

http://onlinepubs.trb.org/onlinepubs/IDEA/Transit_idea_Annual2022.pdf

Current requests for proposals (RFPs): Proposals due no later than 31 January 2023

- [TCRP A-36A](#) Transportation Emergency Response Application (TERA): Migration Options Beyond 2020
- [TCRP D-20](#) Investigation and Mitigation of Insulated Joint Electrical Failure
- [TCRP D-22](#) A Frog Design Primer and Research Roadmap
- [TCRP E-14](#) Lithium-Ion Battery Transit Bus Fire Prevention and Risk Management
- [TCRP H-61](#) A Guide for Resilient Zero-Emission Transit Bus Fleets
- [NCHRP 07-31](#) State DOT and Tribal Use of Active Transportation Data: Practices, Sources, Needs, and Gaps
- [NCHRP 08-144](#) Rural Transit Fleet Mix and Vehicle Size Decision Trees
- [NCHRP 23-11](#) Transportation Emergency Management and Security Summit and Exchange

Contact Stephan A. Parker saparker@nas.edu

Panel information is available
online at <https://www.mytrb.org/OnlineDirectory/Committee/SubmitSearch>

Upcoming TRB Webinars

- [TRB Webinar: Success Strategies for Metropolitan Planning Organizations](#) January 23, 2023 02:00 PM - 03:30 PM U.S. Eastern
- [TRB Webinar: Fare-Free Transit Policies and Programs—An Evaluation Framework](#) January 24, 2023 12:30 PM - 02:00 PM U.S. Eastern
- [TRB Webinar: Electronic Ticketing—Current Practices for Concrete Pavements](#) January 31, 2023 01:30 PM - 03:00 PM U.S. Eastern

TCRP Webinars held in 2022

- [TRB Webinar: Measuring and Managing Fare Evasion](#)
- [TRB Webinar: Trends in Transit Ridership - Analysis, Causes, and Responses](#)
- [TRB Webinar: Expanding Microtransit Services and Improving the Rider Experience](#)
- [TRB Webinar: Cybersecurity Trends in Transportation](#)
- [TRB Webinar: New Transit Fare Policy - Capping and "Cashless" Collection](#)
- [TRB Webinar: Microtransit - Innovations in Rural Mobility](#)
- [APTA Webinar: Strategies for Deterring Trespassing on Rail Transit and Commuter Rights-of-Way](#)
- [TRB Webinar: Prioritization of Public Transportation Investment](#)
- [TRB Webinar: Micromobility and Transit - Keys to Successful Collaboration](#)
- [TRB Webinar: Improving Diversity and Inclusion Programs in Public Transportation](#)

Sign up @: <https://webinar.mytrb.org/Webinars> to participate in TCRP webinars

TCRP Team

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<https://www.apta.com/research-technical-resources/tcrp/>

www.nationalrtap.org

[TCRPAnnual2022.pdf \(trb.org\)](#)

<http://www.trb.org/TCRP>

Air Quality in the Transit Environment

A TCRP VIRTUAL INSIGHT EVENT - JUNE 21 & 22, 2022

TCRP and leading transit and subject matter experts held a virtual Insight Event on Air Quality in the Transit Environment.

This event allowed transit providers and stakeholders to share their knowledge about the issue of air quality inside vehicles to help identify possible solutions to the problems and/or areas of research to be undertaken in future TCRP projects.

The event explored how air quality inside transit vehicles (specifically buses) may contribute to the spread of infections, including COVID-19.

Topics covered during this two-afternoon event include:

June 21, 2022

- Air Quality inside Transit Vehicles
- Optimal Airflow Patterns and Measuring Methods
- Updating and Improving Filtration

June 22, 2022

- Existing and Emerging Technologies
- Modeling and Simulations for Decision Making
- Other Strategies for Mitigating Transmission Risks

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For more information, please contact Mariela Garcia-Colberg, Esq., Senior Program Manager, Transportation Research Board at MGColberg@nas.edu

Air Quality in the Transit Environment

A TCRP Virtual Insight Event – June 12 & 22, 2022

During this two-afternoon event, participants heard from an interactive panel on the intersection of transit air quality and mitigation of transmission of infectious diseases.

- June 21, 2022
 - Air Quality inside Transit Vehicles
 - Optimal Airflow Patterns and Measuring Methods
 - Updating and Improving Filtration
- June 22, 2022
 - Existing and Emerging Technologies
 - Modeling and Simulations for Decision Making
 - Other Strategies for Mitigating Transmission Risk

TCRP Synthesis 2021 Topics Research in Progress

- SA-54 Practices to Improve Pedestrian and Bicycle Safety when Implementing Bus Transit Corridors
- SA-55 On Street Bus Operations Management
- SB-35 Customer Education and Awareness of On-Demand Mobility
- SB-36 Dynamic Optimization on ADA Paratransit Service
- SG-20 Performance Metrics in Third Party Contracts for Bus Operations and Maintenance
- SH-22 Inclusive Public Participation in Transit Decision Making
- SH-23 Partnerships for Equitable Pandemic Response and Recovery

TCRP Synthesis Topics from 2019 & 2020 Published

- SB-33 Uses of Social Media in Public Transportation is now TCRP Synthesis 156
- SA-51 Transit Safety Risk Assessment Methodologies is now TCRP Synthesis 157
- SA-50 Cyber Security in Transit Systems is now TCRP Synthesis 158
- SA-52 Assessing Equity and Identifying Impacts Associated with Bus Network Redesigns is now TCRP Synthesis 159
- SH-21 Transit Fare Capping: Balancing Revenue and Equity Impacts is now TCRP Synthesis 160
- SG-19 Paratransit Service Delivery Models for Small Systems is now TCRP Synthesis 161
- SB-34 Coordination of Public Transit Services and Investments with Affordable Housing Policies is now TCRP Synthesis 162
- SA-53 BRT State of Practice, Experience, and Lessons Learned* (in the publication process)
- SH-19 Considering the Unbanked in Cashless Fare Payment* (in the publication process)